

CLAIMS

What is claimed is:

1. A composite holding device, comprising:
 - a casing for accommodating a plurality of holders for holding media to serve either different or similar purposes;
 - a supporting section for supporting said holders to be movable in an axial direction in the casing;
 - a feed mechanism, provided in the casing, for selectively advancing one of the plurality of holders; and
 - a manipulating mechanism for operating the feed mechanism, to project the tip of one of the plurality of holders out of a fore end opening at the tip of the casing and make usable the tip of one of the plurality of holders,
 - wherein a supported section of each holder supported by said supporting section is rotatably supported in relation to the supporting section.
2. The composite holding device, as set forth in claim 1, further comprising a spherical bearing formed between said supporting section and the supported section provided on each of said holders.
3. The composite holding device, as set forth in claim 2, wherein said spherical

bearing includes a spherical part formed on either one of said supporting section and the supported section provided on a holder and a concave part formed on the other one of said supporting section and supported section provided on the holder to receive said spherical part.

4. The composite holding device, as set forth in claim 1, wherein said media are selected from a group of media consisting of writing-related media including a pencil lead, an ink, a stick glue, an eraser and a correctional fluid, cosmetic media including a lipstick, an eye pencil, an eyeliner and an eyebrow pencil, and data inputting media including a stylus tip.

5. A writing tool comprising a cap into which the composite holding device set forth in claim 1 is built.

6. A composite holding device, comprising:

a holder body for holding a medium to serve a prescribed purpose; and

a cap for covering the holder body,

wherein the cap comprises:

a casing for accommodating a plurality of holders, each holder for holding a medium to serve a purpose either different from or similar to that of said medium;

a supporting section for supporting said holders to be movable in an axial

direction in the casing;

a feed mechanism, provided in the casing, for selectively advancing one of the plurality of holders; and

a manipulating mechanism for operating the feed mechanism, to project the tip of one of the plurality of holders out of a fore end opening at the tip of the casing and make usable the tip of one of the plurality of holders.

7. The composite holding device, as set forth in claim 6, wherein a supported section of each holder supported by said supporting section is rotatably supported in relation to the supporting section.

8. The composite holding device, as set forth in claim 6, further comprising:
a spherical bearing formed between said supporting section and a supported section provided on each of said holders.

9. The composite holding device, as set forth in claim 8, wherein said spherical bearing includes:

a spherical part formed on either one of said supporting section and a supported section provided on a holder; and

a concave part formed on the other one of said supporting section and supported section provided on the holder to receive said spherical part.

10. The composite holding device, as set forth in claim 6, wherein said media are selected out of a group of media consisting of writing-related media including a pencil lead, an ink, a stick glue, an eraser and a correctional fluid, cosmetic media including a lipstick, an eye pencil, an eyeliner and an eyebrow pencil, and data inputting media including a stylus tip.

11. The composite holding device, as set forth in claim 1, wherein:

said casing comprises an external sleeve, an intermediate sleeve fitted inside the external sleeve with assistance of an ancillary sleeve, and a nose rotatable in relation to the external sleeve and the intermediate sleeve;

an internal thread is formed on an inner circumferential face of the intermediate sleeve and a slit is formed on the internally threaded part of the intermediate sleeve;

an external thread is formed on an outer circumferential face of the ancillary sleeve;

one of the externally threaded part of the ancillary sleeve and the internally threaded part of the intermediate sleeve has a tapered shape; and

the external thread of said ancillary sleeve inserted into the external sleeve and the intermediate sleeve engages the internal thread of the intermediate sleeve inserted into the external sleeve, the slit of the intermediate sleeve being expanded to press the internally threaded part against an inner circumferential face of the external

sleeve to fix the intermediate sleeve to the external sleeve, thereby to fit the intermediate sleeve inside the external sleeve.

12. The composite holding device, as set forth in claim 11, wherein a projection to be pressed against the inner circumferential face of the external sleeve is formed on an outer circumferential face of the internally threaded part of said intermediate sleeve.

13. The composite holding device, as set forth in claim 11, wherein one of an adhesive tape and an elastic member is positioned between the outer circumferential face of the internally threaded part of said intermediate sleeve and the inner circumferential face of the external sleeve.

14. The composite holding device, as set forth in claim 1, wherein:
said casing comprises an external sleeve, an intermediate sleeve fitted inside the external sleeve with assistance of an ancillary sleeve and an elastic ring, and a nose rotatable in relation to the external sleeve and the intermediate sleeve;

an internal thread is formed on either one of the intermediate sleeve and the ancillary sleeve, and an external thread to engage the internal thread is formed on the other one of the intermediate sleeve and the ancillary sleeve;

the intermediate sleeve and the elastic ring adjacent to the intermediate sleeve

in the axial direction, are inserted into the external sleeve, the ancillary sleeve is inserted into the external sleeve from the elastic ring side, one of a part of the ancillary sleeve and a part of the intermediate sleeve penetrates the elastic ring, the threaded engagement of said external thread and internal thread with each other serves to combine the intermediate sleeve and the ancillary sleeve, and the elastic ring is compressed in the axial direction between the ancillary sleeve and the intermediate sleeve to be pressed against an inner circumferential face of the external sleeve and thereby to be fixed to the external sleeve, thereby resulting in the fitting of the intermediate sleeve inside the external sleeve.

15. The composite holding device, as set forth in claim 14, wherein a step face for coming into contact with said elastic ring is formed on said ancillary sleeve, and the step face is inclined in relation to the direction of the external diameter.

16. The composite holding device, as set forth in claim 1, wherein:

said casing comprises an external sleeve, an intermediate sleeve fitted inside the external sleeve with the assistance of an ancillary sleeve and a C-ring, and a nose rotatable in relation to the external sleeve and the intermediate sleeve;

an annular concave part is formed on an inner circumferential face of the external sleeve, and the C-ring is fitted into the annular concave part to project more in the direction of the internal diameter than the inner circumferential face of the

external sleeve;

an internal thread is formed on either one of the intermediate sleeve and the ancillary sleeve, and an external thread to engage the internal thread is formed on the other one of the intermediate sleeve and the ancillary sleeve;

a part of the intermediate sleeve is inserted into the external sleeve from one end of the external sleeve, and the other part of the intermediate sleeve not inserted into the external sleeve is brought into contact with the one end of the external sleeve; and

the ancillary sleeve is inserted into the external sleeve from the other end of the external sleeve, one of a part of the ancillary sleeve and a part of the intermediate sleeve penetrates the C-ring, the threaded engagement of said external thread with the internal thread serves to combine the intermediate sleeve and the ancillary sleeve, and the ancillary sleeve comes into contact with the part of the C-ring projecting more than the inner circumferential face of the external sleeve from the other end side of the external sleeve, thereby resulting in fitting the intermediate sleeve inside the external sleeve.

17. The composite holding device, as set forth in claim 6, wherein:

said casing comprises an external sleeve, an intermediate sleeve fitted inside the external sleeve with the assistance of an ancillary sleeve, and a nose rotatable in relation to the external sleeve and the intermediate sleeve;

an internal thread is formed on an inner circumferential face of the intermediate sleeve and a slit is formed on the internally threaded part of the intermediate sleeve;

an external thread is formed on an outer circumferential face of the ancillary sleeve;

one of the externally threaded part of the ancillary sleeve and the internally threaded part of the intermediate sleeve has a tapered shape; and

the internal thread of the intermediate sleeve inserted into the external sleeve engages with the external thread of said ancillary sleeve inserted into the external sleeve and the intermediate sleeve, the slit of the intermediate sleeve being expanded to press the internally threaded part against an inner circumferential face of the external sleeve to fix the intermediate sleeve to the external sleeve, thereby to fit the intermediate sleeve inside the external sleeve.

18. The composite holding device, as set forth in claim 6, wherein:

said casing comprises an external sleeve, an intermediate sleeve fitted inside the external sleeve with assistance of an ancillary sleeve and an elastic ring, and a nose rotatable in relation to the external sleeve and the intermediate sleeve;

an internal thread is formed on either one of the intermediate sleeve and the ancillary sleeve, and an external thread to engage with the internal thread is formed on the other one of the intermediate sleeve and the ancillary sleeve;

the intermediate sleeve and the elastic ring adjacent to the intermediate sleeve in the axial direction, are inserted into the external sleeve, the ancillary sleeve is inserted into the external sleeve from the elastic ring side, one of a part of the ancillary sleeve and a part of the intermediate sleeve penetrates the elastic ring, the threaded engagement of said external thread and internal thread with each other serves to combine the intermediate sleeve and the ancillary sleeve, and the elastic ring is compressed in the axial direction between the ancillary sleeve and the intermediate sleeve to be pressed against an inner circumferential face of the external sleeve, thereby to be fixed to the external sleeve, thereby resulting in the fitting of the intermediate sleeve inside the external sleeve.

19. The composite holding device, as set forth in claim 6, wherein:

said casing comprises an external sleeve, an intermediate sleeve fitted inside the external sleeve with the assistance of an ancillary sleeve and a C-ring, and a nose rotatable in relation to the external sleeve and the intermediate sleeve;

an annular concave part is formed on an inner circumferential face of the external sleeve, and the C-ring is fitted into the annular concave part to project more in a direction of the internal diameter than the inner circumferential face of the external sleeve;

an internal thread is formed on either one of the intermediate sleeve and the ancillary sleeve, and an external thread to engage with the internal thread is formed

on the other one of the intermediate sleeve and the ancillary sleeve;

a part of the intermediate sleeve is inserted into the external sleeve from one end of the external sleeve, and the other part of the intermediate sleeve not inserted into the external sleeve is brought into contact with the one end of the external sleeve; and

the ancillary sleeve is inserted into the external sleeve from the other end of the external sleeve, one of a part of the ancillary sleeve and a part of the intermediate sleeve penetrates the C-ring, the threaded engagement of said external thread with internal thread serves to combine the intermediate sleeve and the ancillary sleeve, and the ancillary sleeve comes into contact with the part of the C-ring projecting more than the inner circumferential face of the external sleeve from the other end side of the external sleeve, thereby resulting in the fitting of the intermediate sleeve inside the external sleeve.

20. A holding device, comprising:

a casing for accommodating a plurality of holders for holding media;
a supporting section for supporting said holders to be movable;
means for selectively advancing one of the plurality of holders; and
means for operating the advancing means, to project the tip of one of the plurality of holders out of a fore end opening at the tip of the casing and make usable the tip of one of the plurality of holders,

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